

GEMALINK INT'L PORT

GEMALINK INT'L PORT

CMA CGM CORTE REAL

Report

Executive summary

SKILLS FORECAST FOR VIETNAM'S PORT INDUSTRY 2024-2028

INTRODUCTION

Following the positive feedback to its Skills Forecast Report for Vietnam's logistics industry in 2020, the Logistics Industry Reference Council (LIRC) has crafted a tailored report on the country's port industry. This new report aligns with the master development plan for Vietnam's seaport system for 2021-2030 with a vision to 2050, as set forth in Prime Ministerial Decision No. 1579/QĐ-TTg, 22 September 2021.

Professor Dr. Thai Van Vinh from the Faculty of Logistics and Supply Chain at RMIT University led the report with distinguished assistance from:

1. Ms. Bui Thi Ninh, VCCI-HCM
2. Ms. Cao Thi Quynh Giao, Vietnam Shipping Gazette
3. Ms. Chu Thi Hue, Ho Chi Minh City University of Technology and Education (HCMUTE)
4. Mr. Nguyen Hong Hai, Lita Express Company
5. Ms. Vu Thi Hai Van, Maritime College 1
6. Ms. Trinh Ngoc Thu Ha, Maritime College 1
7. Ms. Bui Do Ngan Giang, Vietnam Shipping Gazette
8. Mr. Hoang Thai Son, Quality Management Department, Ministry of Education and Training

The Australian Department of Foreign Affairs and Trade sponsored the report through the Aus4Skills program, with the support of the Directorate of Vocational Education and Training and the Ho Chi Minh City branch of the Vietnam Chamber of Commerce and Industry (VCCI-HCM). This partnership driven initiative demonstrates a concerted effort towards advancing skill development and strategic planning within Vietnam's vital port sector.





LOGISTICS INDUSTRY REFERENCE COUNCIL (LIRC)

The Logistics Industry Reference Council (LIRC) is a platform for partnership and cooperation between stakeholders. LIRC facilitates the joint implementation of the Industry Reference Council following the Australian model, adapting the context of Vietnam.



Among others, LIRC focuses on promoting comprehensive and substantive cooperation between training institutions and businesses in technical and vocational education and training (TVET), including training, practice, assessment and recruitment; developing occupational standards and occupational skill standards; providing both industry and relevant government agencies with information and skills needs by producing reports on human resource and skills development for the industry, with a focus on skills forecasts.

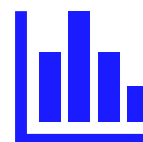
OBJECTIVES

1



Fulfil LIRC's core functions in an industry-led model

Provide factual information on the port industry's labour skills requirements for 2024-2028



2

3



Respond to anticipated changes in the port industry's labor market in the years to come

Provide recommendations for practical and effective policy and human resource training in the port industry



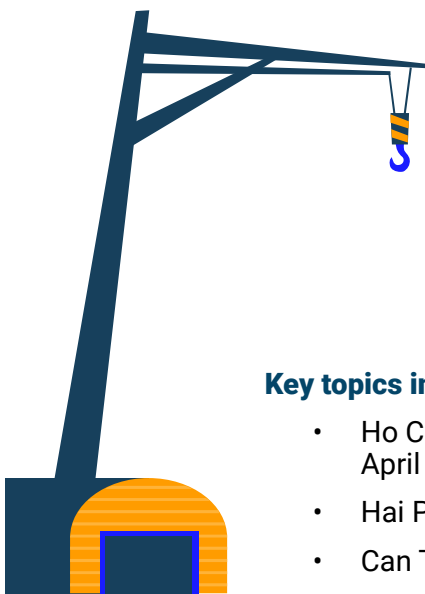
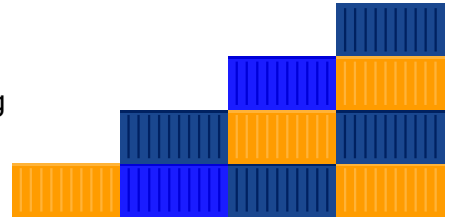
4

METHODOLOGY

The forecast's research methodology comprised three main phases.

Phase 1: Desktop study

The report's authors collected and analysed secondary data for a preliminary analysis and overview of Vietnam's port industry, focusing on labour supply and demand and development trends.



Phase 2: In-depth interviews

The authors conducted comprehensive interviews with nine port industry experts occupying senior human resource and executive management roles. Their input proved invaluable for the three focus groups held in Ho Chi Minh City, Hai Phong and Can Tho. These discussions included representatives from 20 port and inland container depots, all possessing extensive industry experience of at least 10 years in senior management positions.

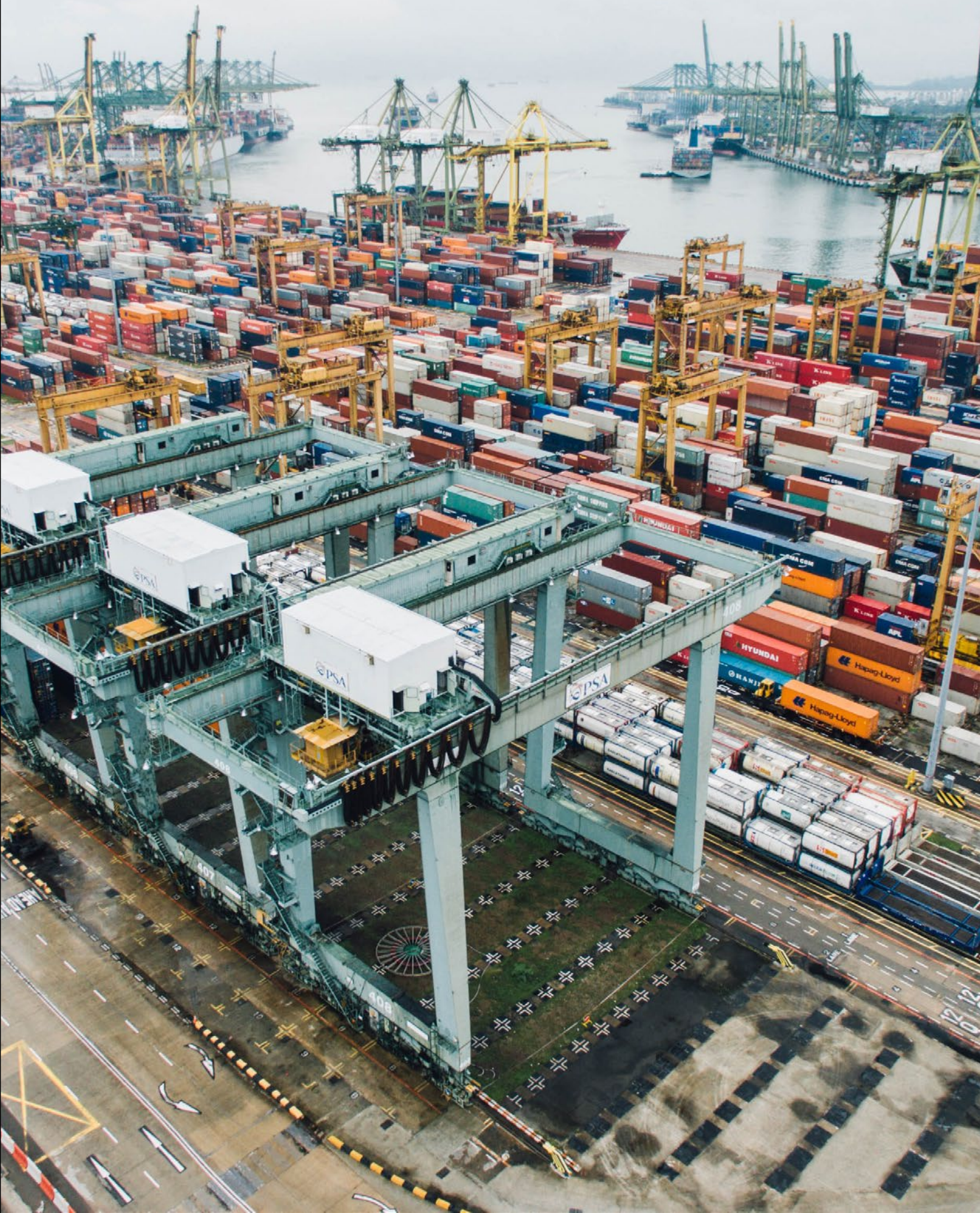
Key topics in group discussions

- Ho Chi Minh City - 12 April 2023
 - Hai Phong - 14 April 2023
 - Can Tho - 10 May 2023
1. Assessment of the current workforce demand in the port industry
 2. Port industry development trends and impact on workforce demand
 3. The required competencies for industry development trends

Phase 3: Questionnaire survey

The researchers engaged with 42 survey respondents across all port sub-sectors to quantitatively validate the qualitative results from phase 2 to analyse and forecast job positions in demand and their corresponding competency requirements.

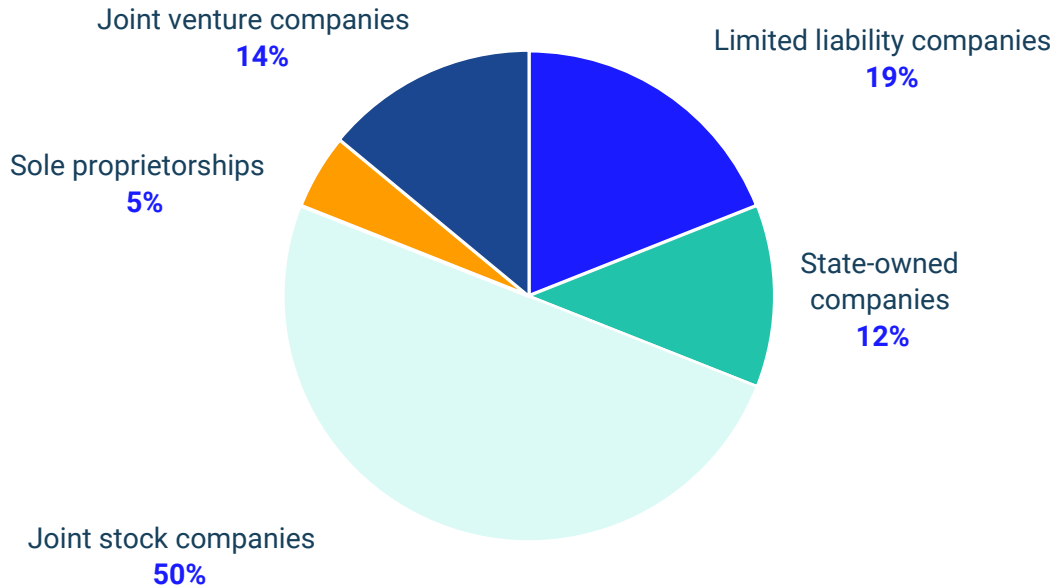




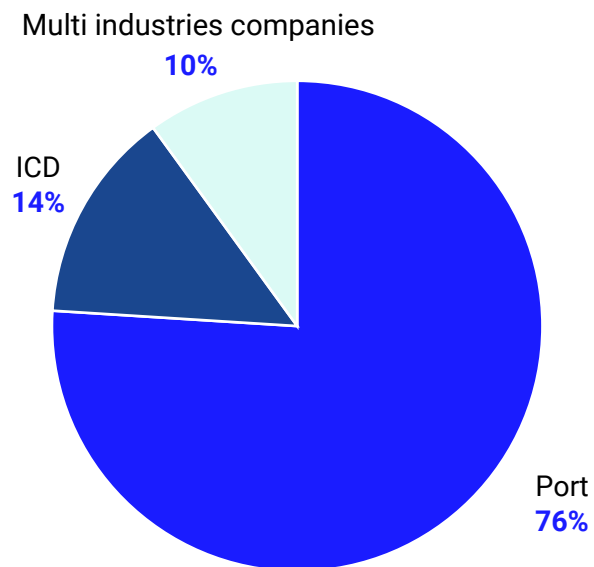
KEY FINDINGS

General information on survey cohort

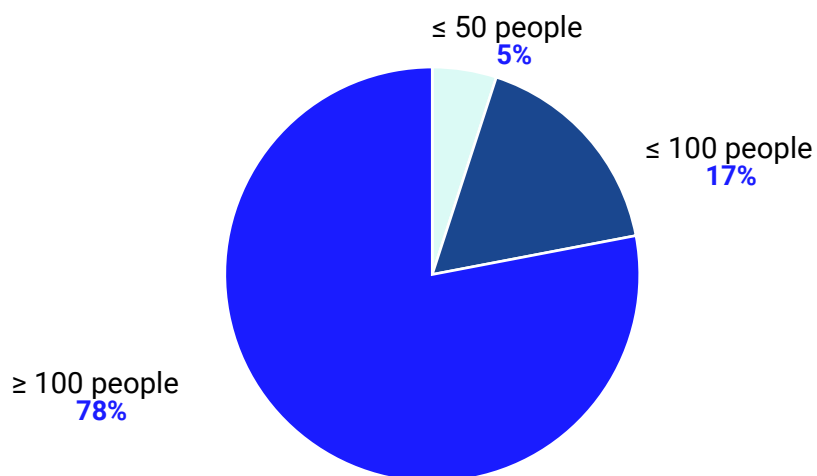
1. Types of business entity



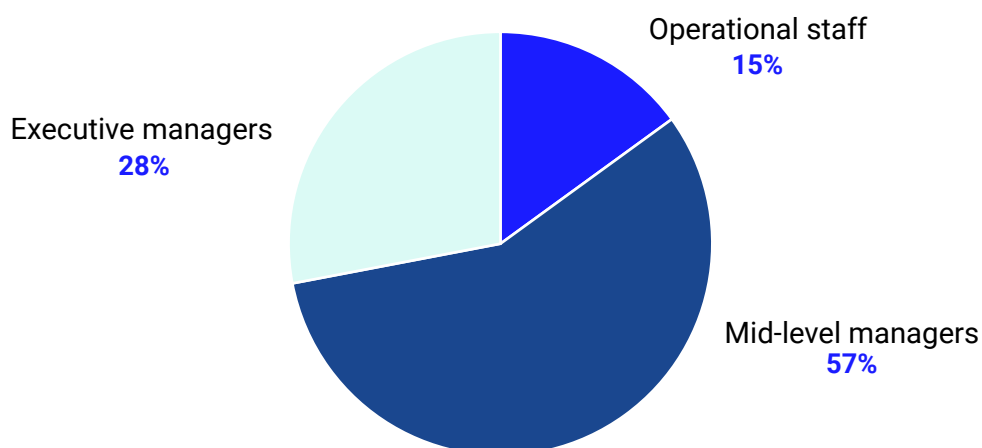
2. Business sectors of the survey cohort



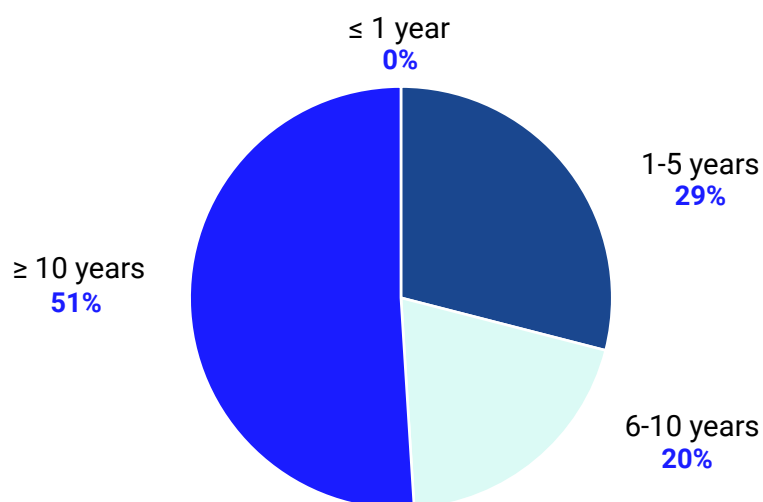
3. Number of employees at surveyed businesses



4. Designation of survey respondents



5. Work tenure of survey respondents in current job position



POSITIONS IN SHORTAGE AND SOLUTIONS

Vietnam’s seaport businesses always face a serious shortage of port facility and equipment operators, as well as port operations and technical workers and stevedores (direct workers).

Hard-to-fill positions:



Equipment and vehicle operators

Pedestal cranes

Ship-to-shore gantry cranes

Tractor/truck, rubber tyred gantry cranes

Other on-shore cranes

Port operations and technical workers and stevedores

Repair and maintenance of loading and unloading equipment and containers

Planning (vessels/ wharves, yards, warehouses, vehicles)

Container inspection, repair and cleaning

Dispatching (vessels/ wharves, yards, warehouses, vehicles)

Facility repair



Average recruitment needs of seaport businesses for two groups of direct workers:

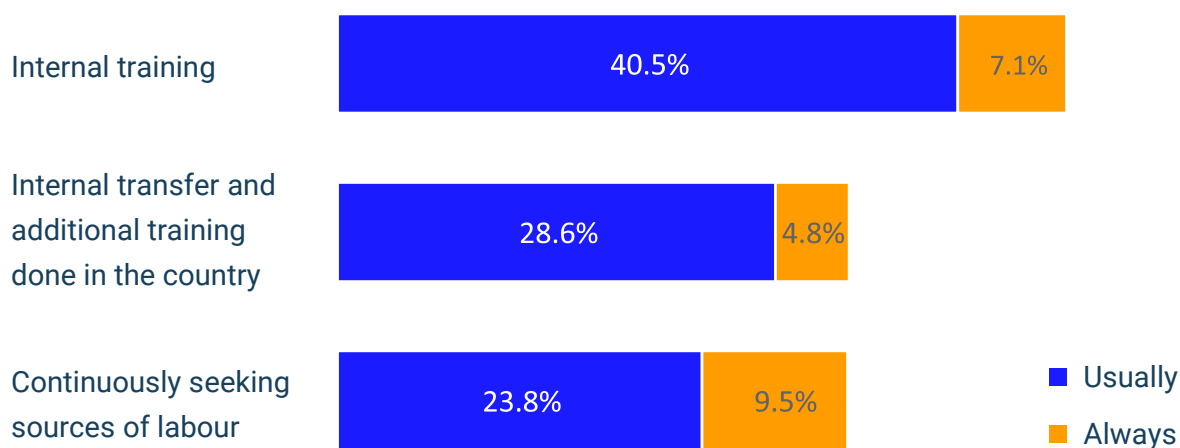
	Port facility and equipment operators	Port operational and technical workers
1	Tractor / Truck	Freight forwarding (yards, warehouses)
2	Jib crane (pedestal crane)	Cargo handing
3	Rubber tyred gantry crane (RTG)	Tallying
4	Ship-to-shore gantry crane	Container inspection, repair, cleaning

Reasons for recruitment difficulty: Tractor and truck operators, cargo handlers and tally clerks require low skill levels, knowledge and training facilities.

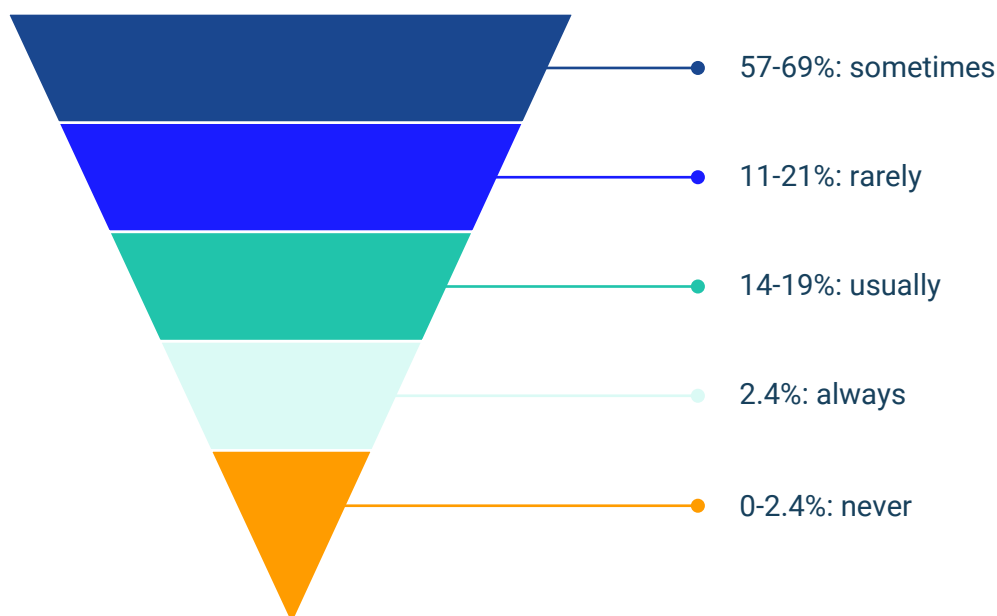
In addition, recruitment challenges such as a lack of experienced candidates, unattractive offers by employers and high work pressure affect certain jobs.

Addressing the shortage of direct workers faced by the seaport industry:

Recruitment of short-term seasonal workers, internal transfer and additional overseas training are not chosen by seaport businesses, with **over 67%** of them **never and rarely implementing** these solutions.



Outsourcing identified positions and overtime arrangements among skilled employees

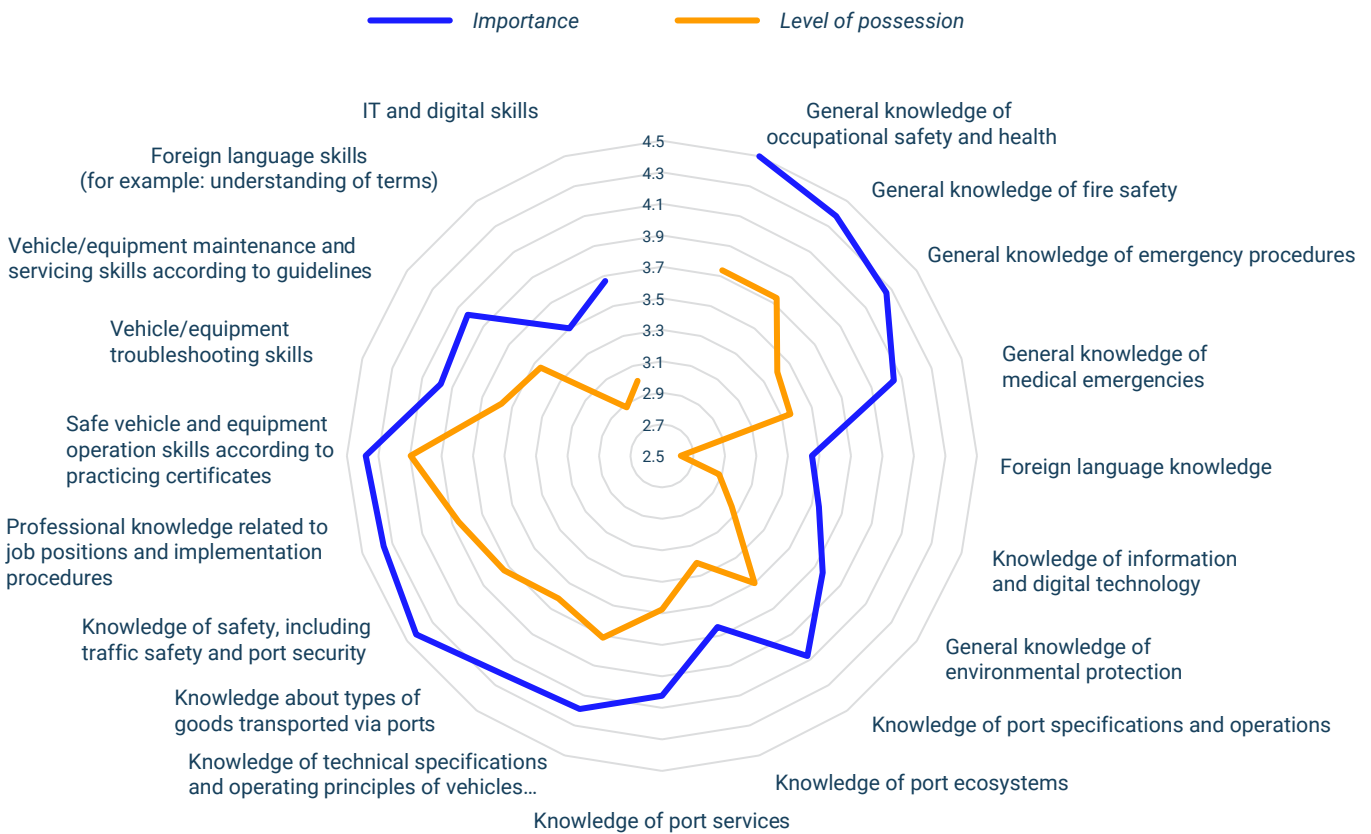


IMPORTANCE AND LEVEL OF POSSESSION OF KNOWLEDGE AND SKILLS

The five most important knowledge/skills for successful job performance of direct port workers include:

	Port facility and equipment operators	Port operational and technical workers
1	Occupational safety and health	Fire safety
2	Traffic safety and port security	Traffic safety and port security
3	Safe vehicle and equipment operation according to practicing certificates	Occupational safety and health
4	Fire safety	Dealing with emergencies
5	Operations related to job positions and implementation procedures	Task fulfilment according to job functions

Differences between the importance and level of knowledge/skill - Vehicle/equipment operators



	Technical equipment and vehicle operators	Port operators, technical workers and stevedores
High	Safe vehicle and equipment operation according to practicing certificates	Occupational safety and health
	Operations related to job positions and implementation procedures	Fire safety
	Occupational safety and health	Traffic safety and port security
Low	Knowledge of IT and digital technology	Knowledge of IT and digital technology
	Foreign language proficiency (ability to read job-related terminology)	Foreign language communication skills
	Foreign language proficiency	Foreign language proficiency

Four knowledge or skill areas where a large gap exists between the importance and level of possession among direct workers:

	Port facility and equipment operators	Port operational and technical workers
1	Foreign language proficiency	Foreign language proficiency
2	Dealing with emergencies	Dealing with emergencies
3	Occupational safety and health	Communication in foreign languages for special purposes
4	Environmental protection	Environmental protection



THE IMPORTANCE AND LEVEL OF POSSESSION OF OTHER ATTITUDES AND CAPABILITIES

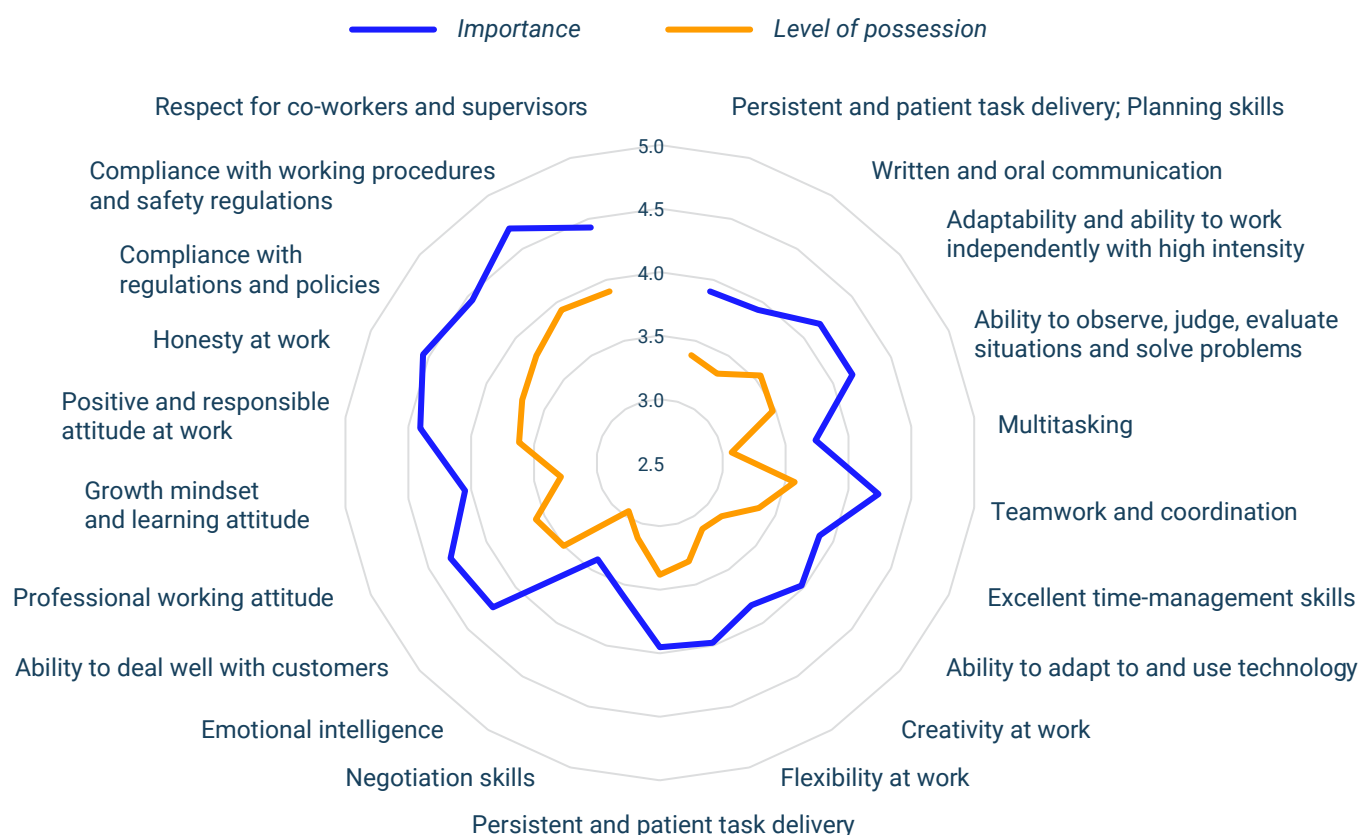
The report indicates that port workers **are expected to have six key attitudes and capabilities.**

	Port facility and equipment operators	Port operational and technical workers
1	Compliance with working procedures and occupational safety	Compliance with working procedures and occupational safety
2	Job integrity	Job integrity
3	Compliance with regulations, policies (including confidentiality obligations)	Respect for co-workers and supervisors
4	Respect for co-workers and supervisors	Being proactive and accountable at work
5	Being proactive and accountable at work	Compliance with regulations, policies (including confidentiality obligations)
6	Professionalism	Professionalism

In addition, direct workers currently have **different levels of possession of three attitudes and capabilities:**

		Technical equipment and vehicle operators	Port operators, technical workers and stevedores
High	>>	Compliance with working procedures and occupational safety	Compliance with working procedures and occupational safety
	>>	Respect for co-workers and supervisors	Respect for co-workers and supervisors
	>>	Compliance with regulations, policies (including confidentiality obligations)	Compliance with regulations, policies (including confidentiality obligations)
Low	>>	Negotiation	Creativity at work
	>>	Multitasking	Emotional intelligence
	>>	Emotional intelligence	Negotiation

Difference between importance and level of attitude/capability possession - Vehicle/equipment operators



There is a significant gap between five important attitudes and capabilities and the number of port workers equipped with them, as indicated in the following table:

	Port facility and equipment operators	Port operational and technical workers
1	Job integrity	Professionalism
2	Adapting to and using new technologies	Persistent and patient task delivery
3	Positive and responsible attitude at work	Flexibility at work
4	Compliance with working procedures and occupational safety	Work planning
5	Growth mindset and learning attitude	Growth mindset and learning attitude

Other essential attitudes and abilities need consideration when evaluating and comparing the importance and level of possession of knowledge and skills related to port operations. As the report's researchers noted, businesses need to focus on:

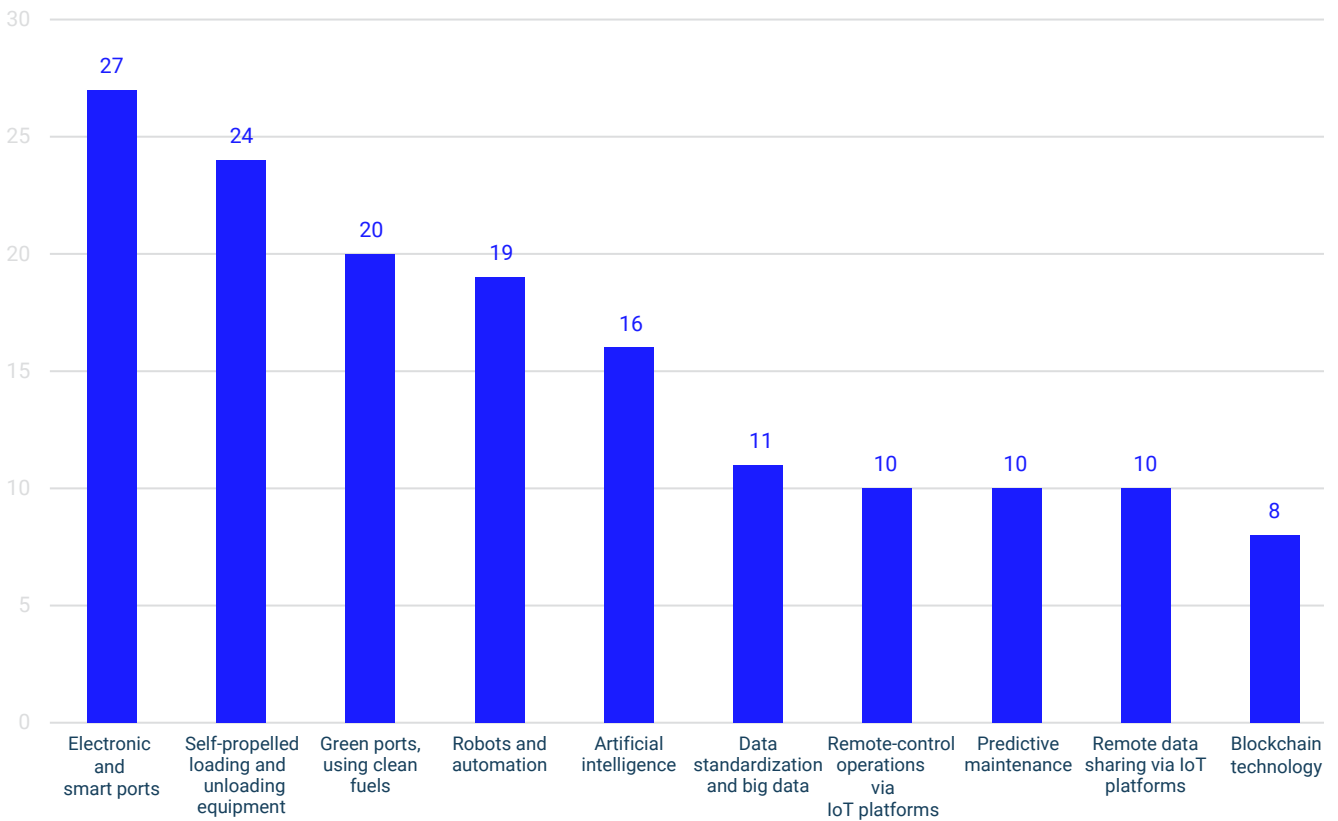
1. Sustainably maintaining knowledge, skills, attitudes and capabilities that are perceived as highly important and are currently possessed at the average and high levels.
2. Developing knowledge, skills, attitudes and capabilities that are perceived to be highly important but currently possessed at the medium low levels, reallocating resources to those that are highly perceived to be important and now developed at a medium high level.
3. Developing knowledge, skills, attitudes and capabilities that are perceived to be highly important but currently possessed at the low and average levels.

DEVELOPMENT TRENDS AND IMPACT ON HUMAN RESOURCE NEEDS

The survey revealed five **port industry development trends for 2024-2028** that will impact the demand of port workers at the operational level, including:

1. Electronic and smart ports
2. Self-propelled loading and unloading equipment
3. Green ports (using clean fuels)
4. Robots and automation
5. Artificial Intelligence (AI)

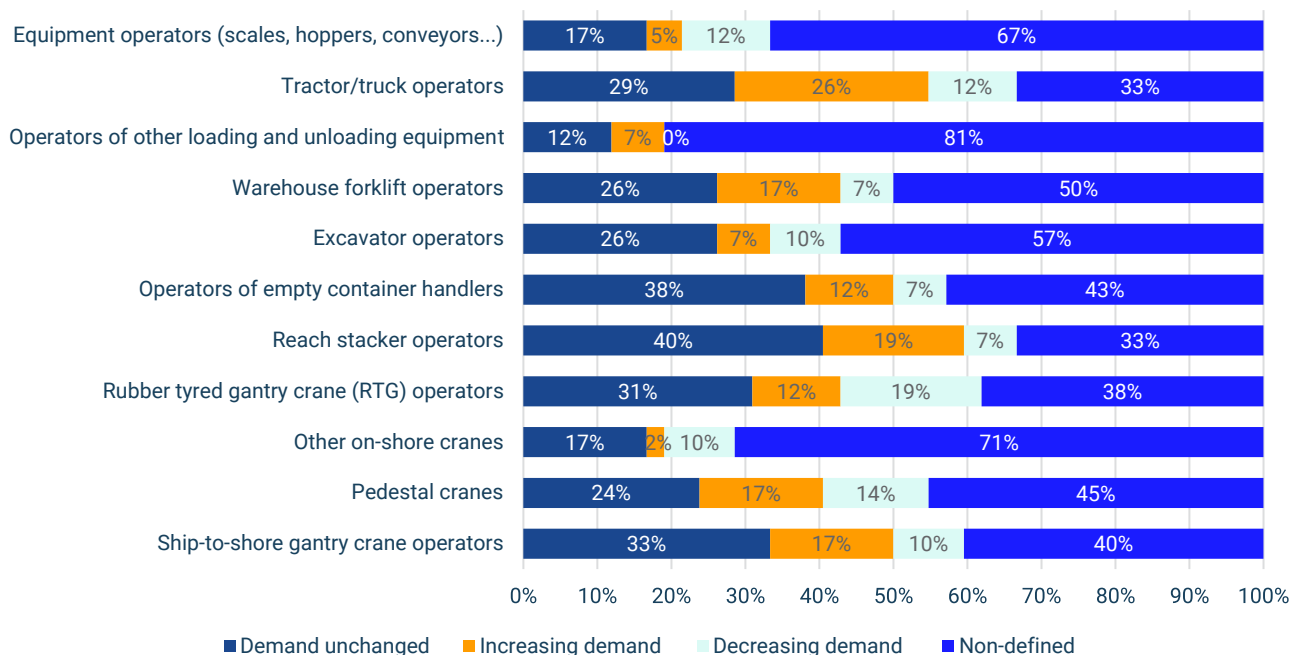
Development trends that have a major impact on port workers at the operational level in the port industry



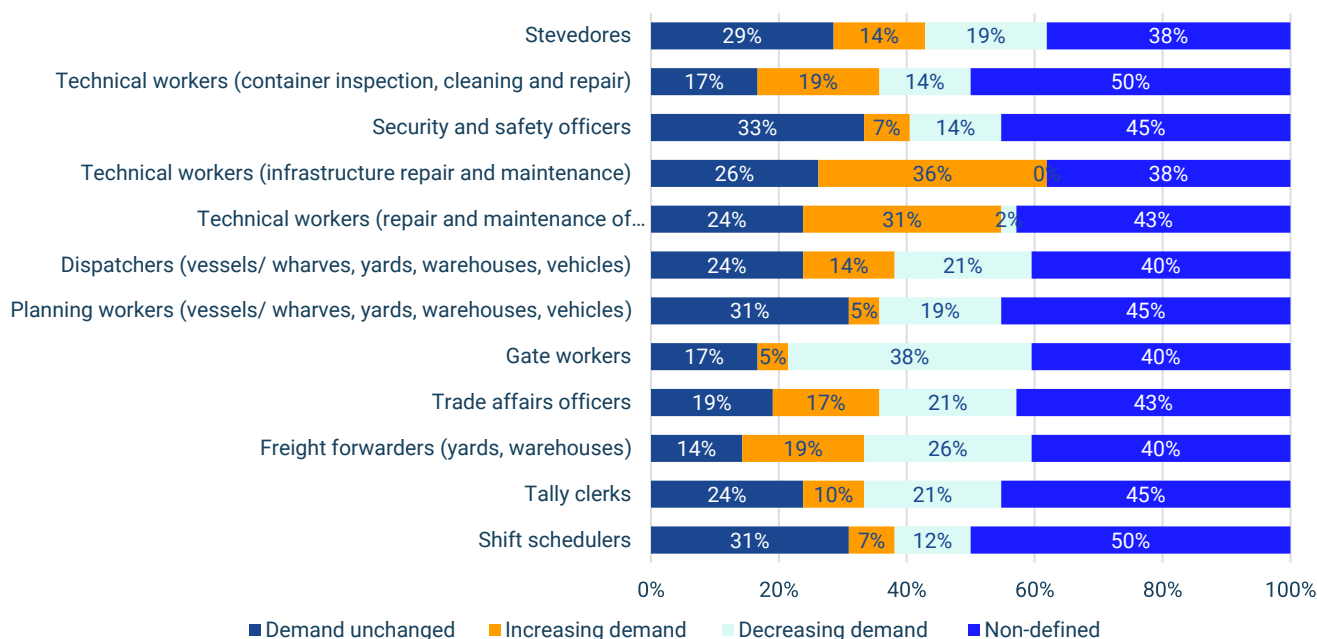
These green technology trends are consistent with the government's integration and development strategy for developing Vietnam into a strong maritime nation. Central to this strategy is developing an efficient and robust seaport system. These technology trends will significantly impact Vietnam's human resource needs in its future seaport sector.

The report's assessment of seaport businesses for 2024-2028 indicates that there will be a strong shift in the human resource needs in the industry, especially for equipment and, vehicle operators, and for port operators and technical officers, due to technology trends to promote seaport economic development in Vietnam.

Impacts of development trends on labour demand for port facility and equipment operators



Impacts of development trends on labour demand for port operations and technical workers and stevedores



According to the survey findings, equipment and vehicle operator positions likely to experience shortages in the near future include:



Truck and tractor operators



Reach stacker operators



Pedestal crane operators

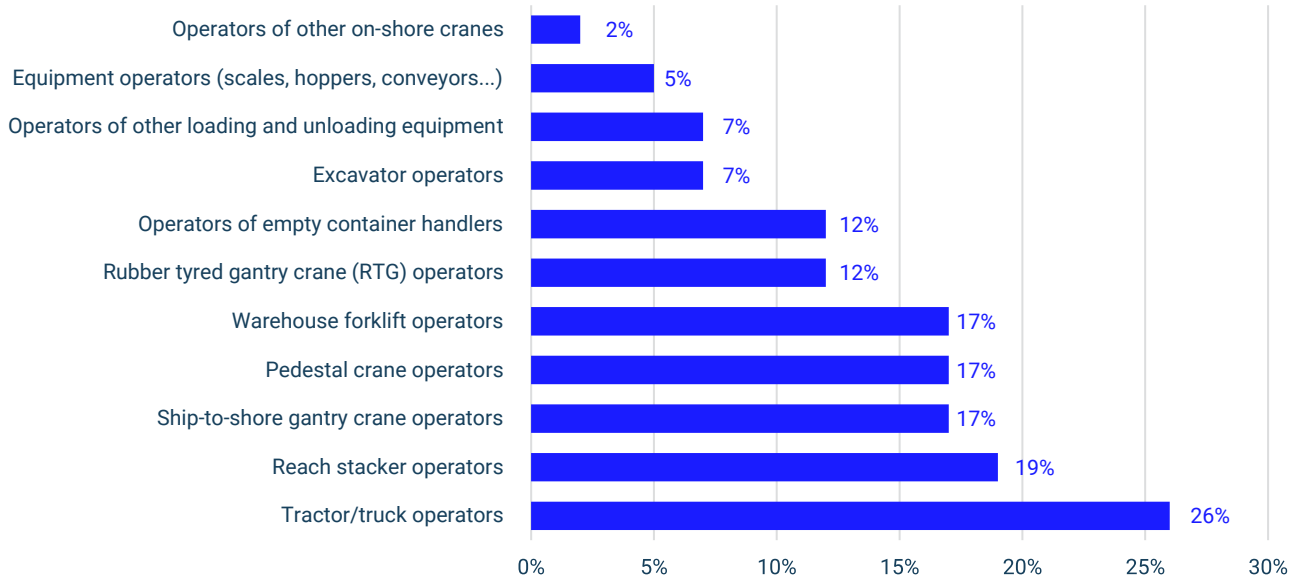


Ship-to-shore gantry crane operators

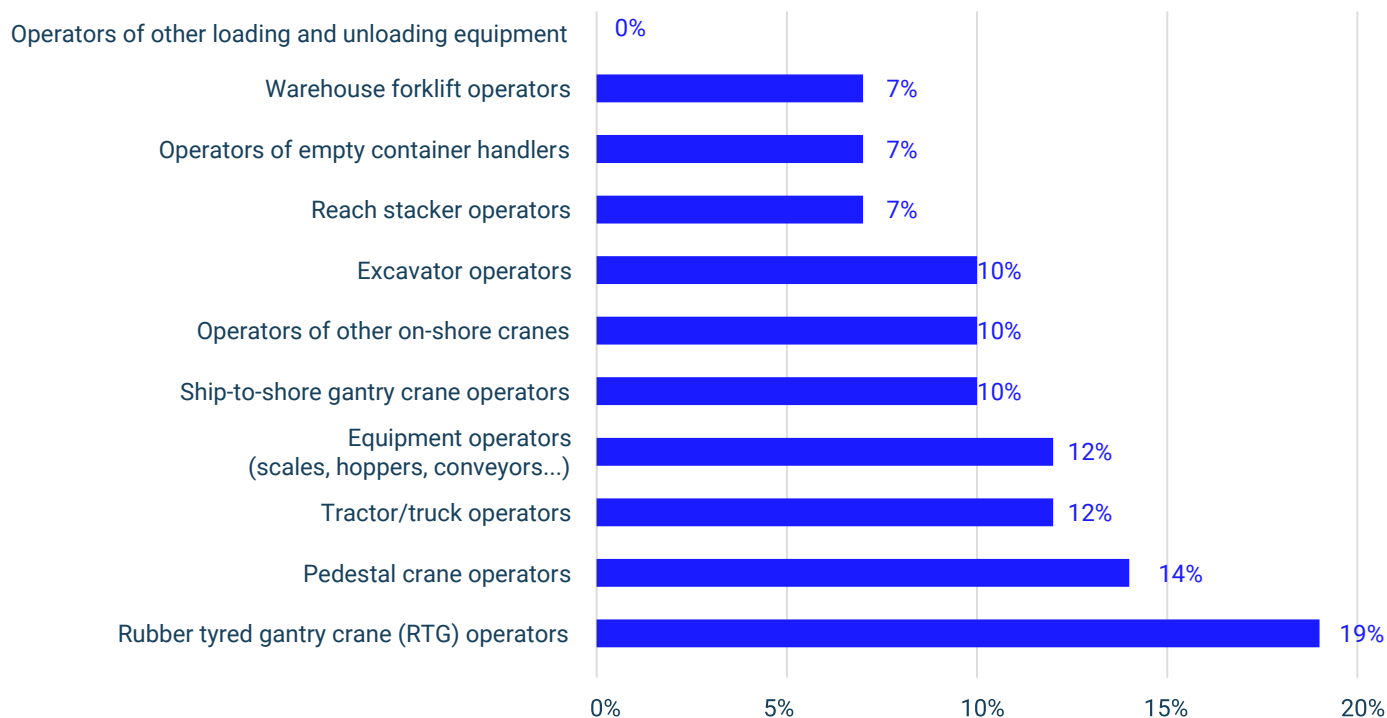


Forklift operators
(in warehouses and yards)

Job positions with increasing demand - Port facility and equipment operators



Job positions with decreasing demand - Port facility and equipment operators



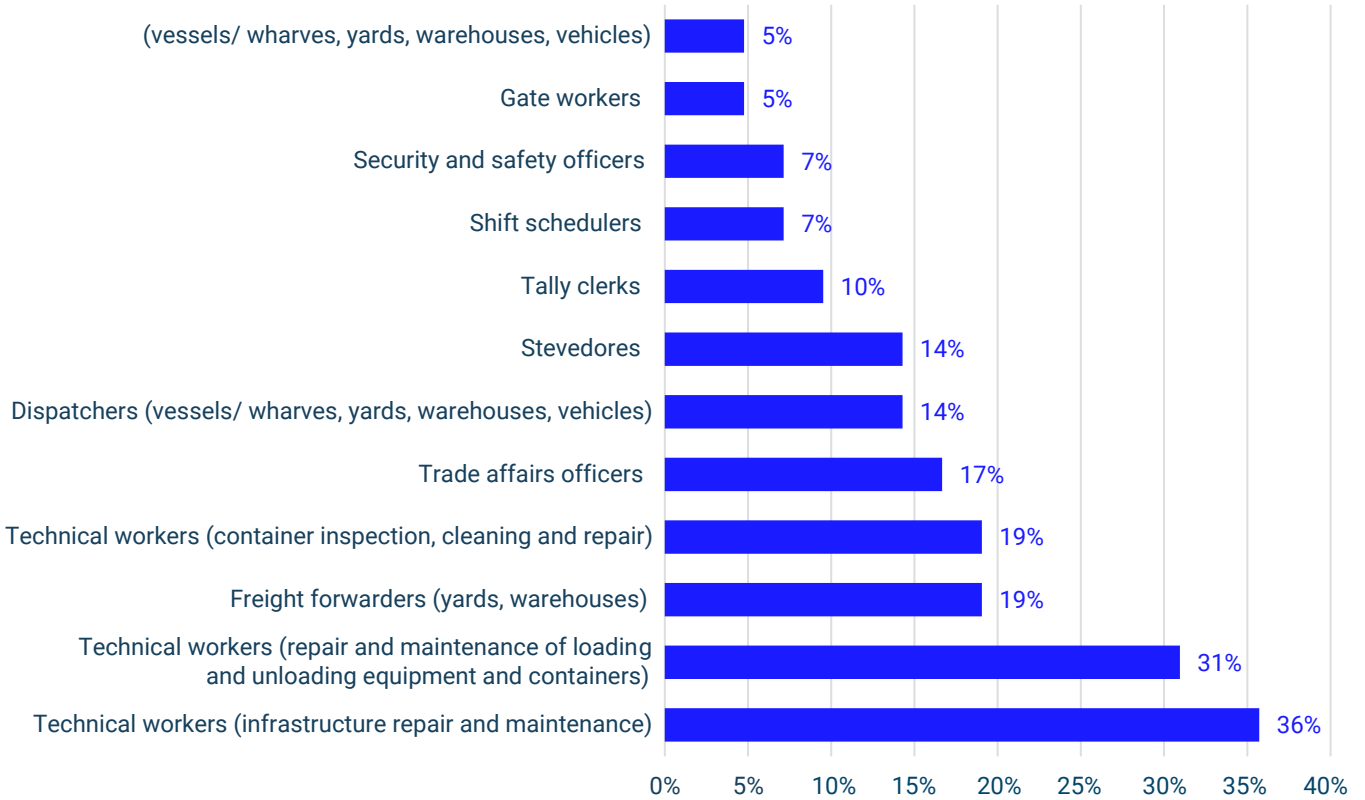
The above survey findings also show the correlation between future seaport development trends and increasing digitalisation, automation and special technology in port equipment and facilities. These trends are happening rapidly, requiring human resources to be trained in emerging skill areas, especially those involving local ports.

Regarding port operations, technical workers and stevedores, job growth is expected in the following:

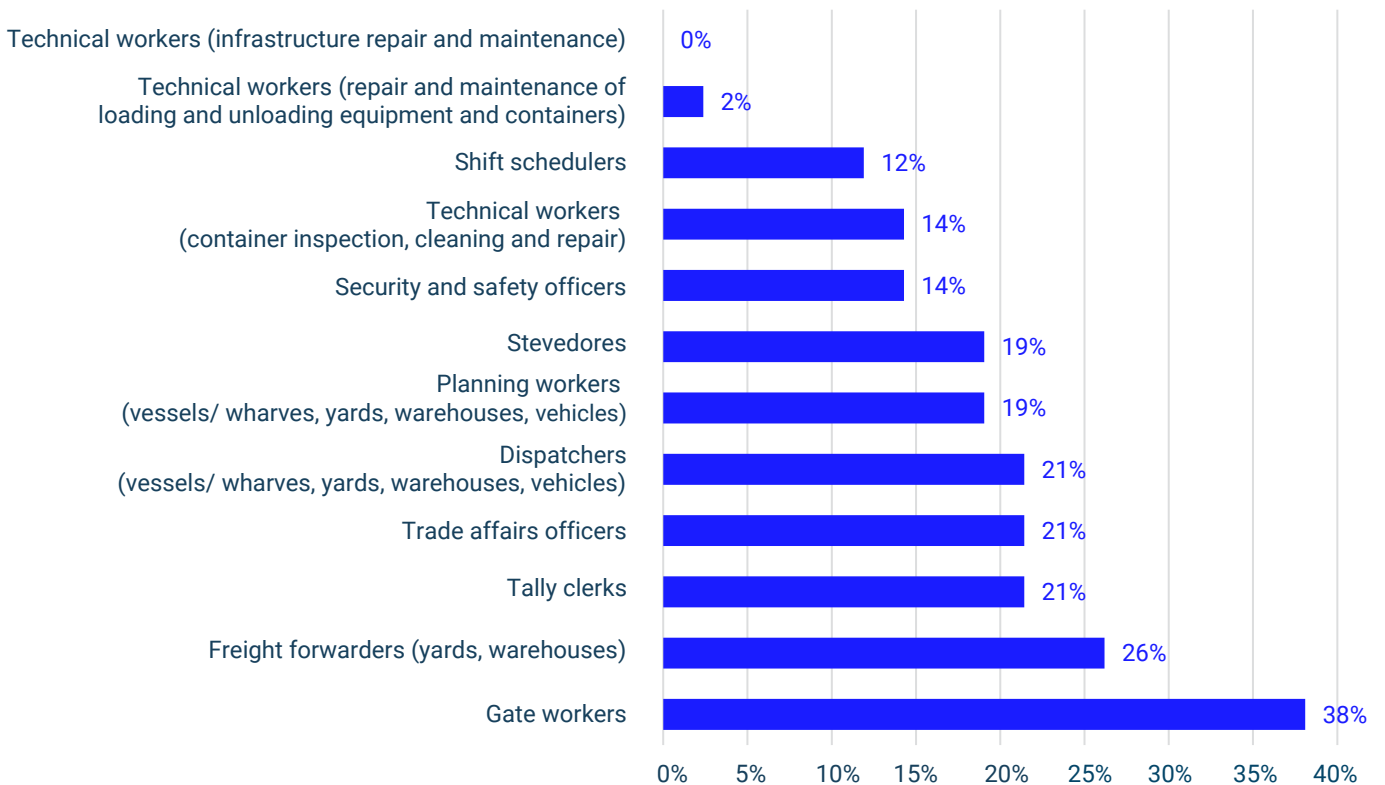
1. Technical workers – infrastructure repair and maintenance
2. Technical workers – repair and maintenance of loading and unloading equipment and containers
3. Freight forwarders – yards, warehouses
4. Technical workers – container, inspection, cleaning and repair
5. Trade affairs officers



Job positions with increasing demand - Port operations and technical workers



Job positions with decreasing demand - Port operations and technical workers

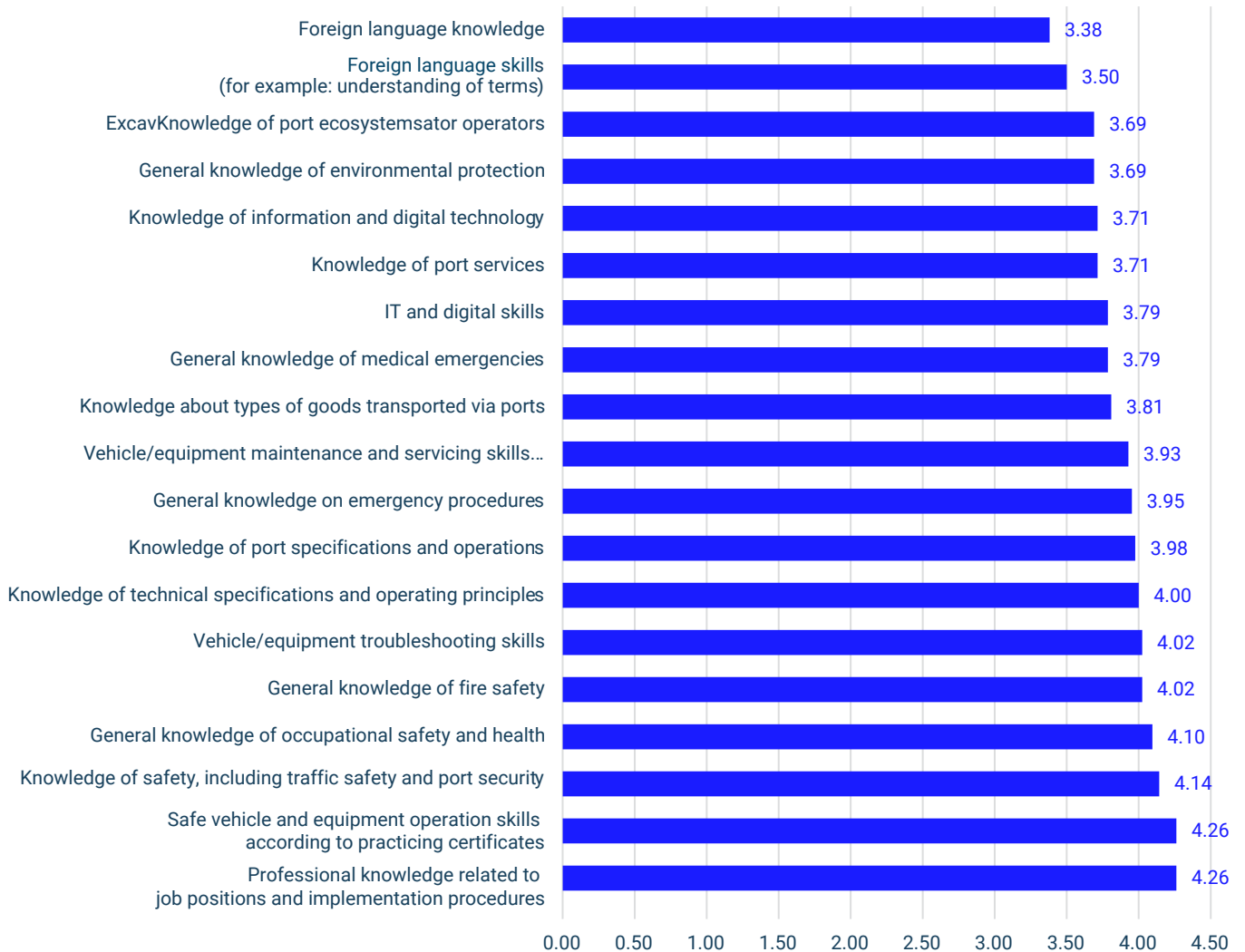


As already observed in the increasing need for technical port facility and equipment operators, demand for port operations, technical workers and stevedores is expected to grow during 2024-2028 in response to technologically driven change in Vietnam’s port system.



PORT INDUSTRY DEMAND FOR WORKERS WITH ESSENTIAL KNOWLEDGE AND SKILLS

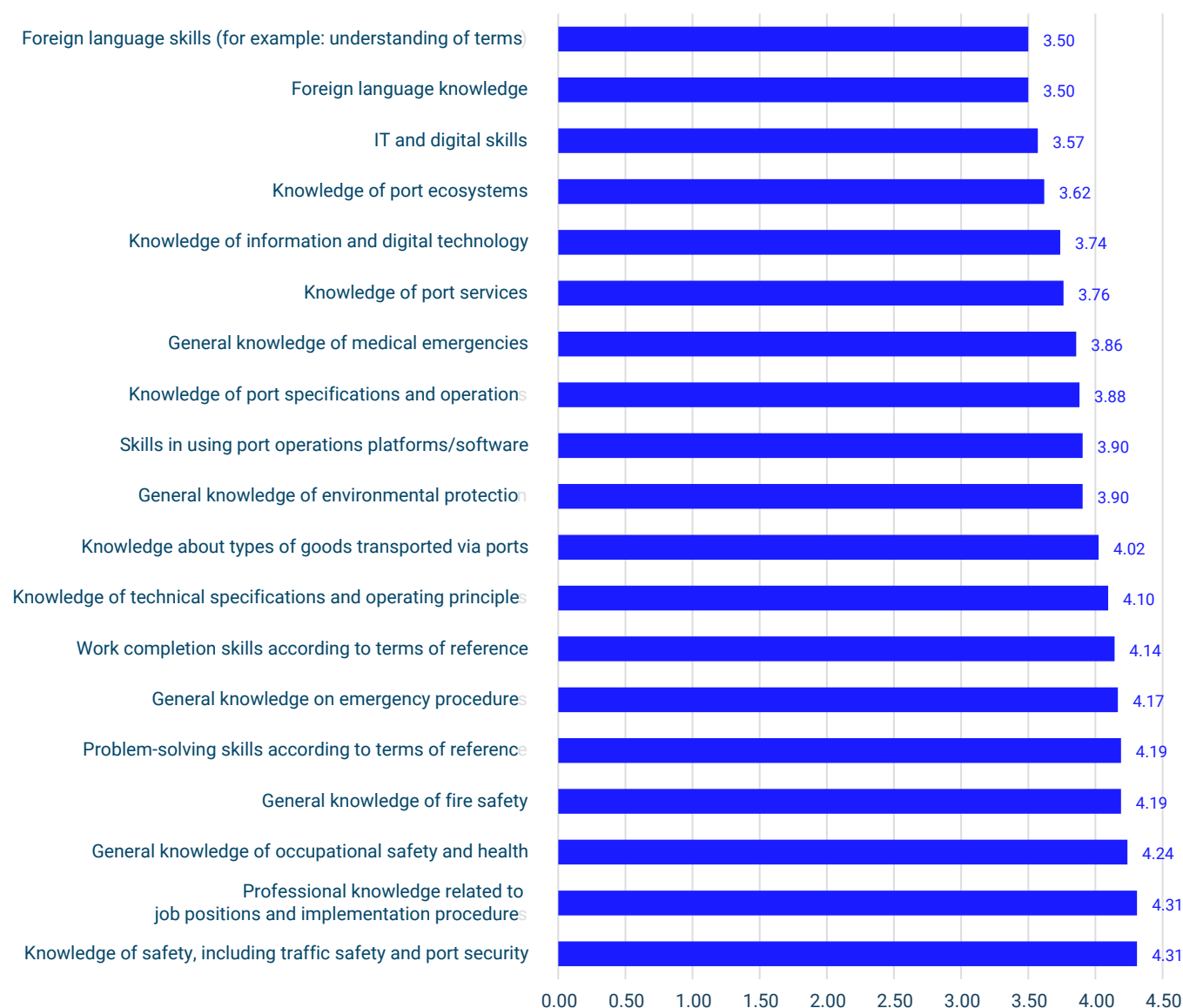
Knowledge/skills in demand – Port facility and equipment operators



The survey results show that port service providers consider as high priority, or close to extremely high priority, the following **five essential knowledge and skill demands** among port facility and equipment operators:

1. Professional knowledge related to job positions and operation procedures
2. Safe vehicle and equipment operation skills according to practicing certificates
3. Knowledge of safety, including traffic safety, and port security
4. General knowledge on occupational health and safety
5. General knowledge of fire safety

Demand for workers with essential knowledge/skills - Port operational and technical workers



The survey found that the following **knowledge and skills** will be sought-after among port operations, technical workers and stevedores over the next five years:

1. Knowledge of safety, including traffic safety, and port security
2. Professional knowledge related to job positions and operation procedures
3. General knowledge on occupational health and safety
4. General knowledge of fire safety

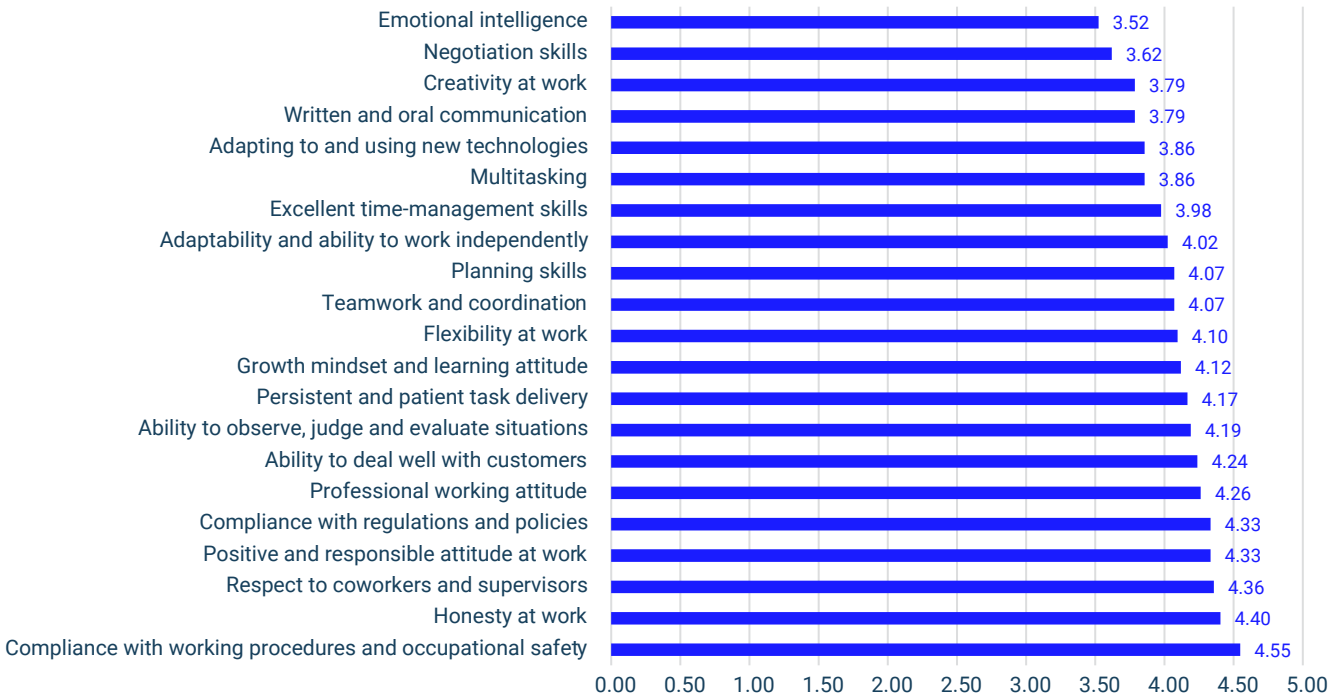
Other highly sought-after knowledge and skills include vehicle/equipment troubleshooting skills among port facility and equipment operators and problem-solving skills among port operations and technical workers and stevedores.

DEMAND FOR PORT INDUSTRY WORKERS WITH OTHER ESSENTIAL ATTITUDES AND CAPABILITIES

Attitudes/capabilities in demand – Port facility and equipment operators



Importance of attitudes/capabilities – Port operational and technical workers



According to the survey findings, **seven essential attitudes and capabilities are likely to be** highly or extremely sought-after in the next five years among *port facility and equipment operators as well as port operations, technical workers and stevedores*. The seven attributes comprise:

1. Compliance with working procedures and occupational safety
2. Positive and responsible attitude at work
3. Honesty at work
4. Respect to coworkers and supervisors
5. Compliance with regulations, policies (including confidentiality of business information)
6. Professional working attitude
7. Growth mindset and learning attitude

This finding means port industry employers will likely focus on recruiting highly self-disciplined individuals.

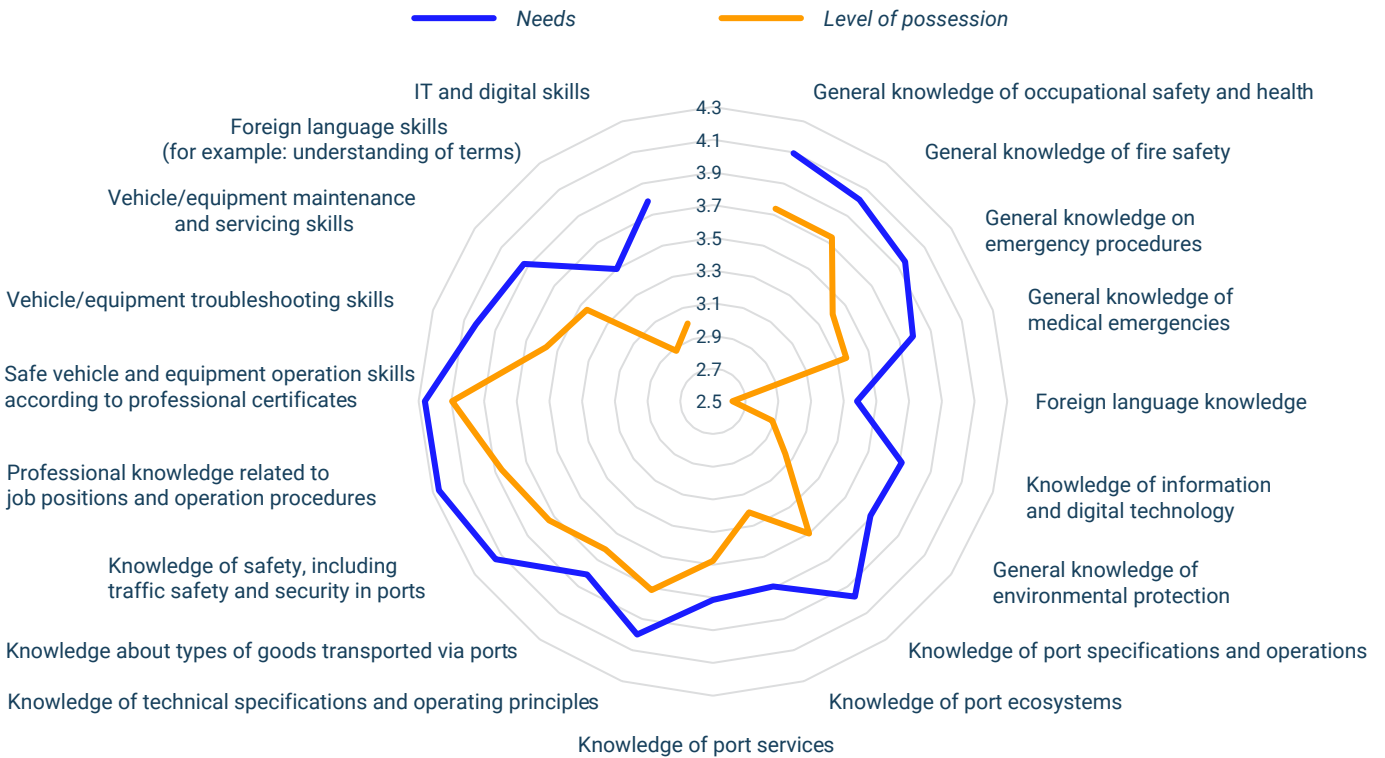
Other **highly sought-after attitudes and abilities** among *port facility and equipment operators, technical workers, stevedores and port operations* include the following:

1. Ability to deal well with customers
2. High adaptability and ability to work independently
3. Team work and coordination
4. Ability to observe, judge, evaluate situations and solve problems



A COMPARISON BETWEEN CURRENT STATUS AND FUTURE DEMAND FOR WORKERS WITH ESSENTIAL KNOWLEDGE AND SKILLS

Gaps between demand for and level of knowledge/skills possession - Vehicle/equipment operators

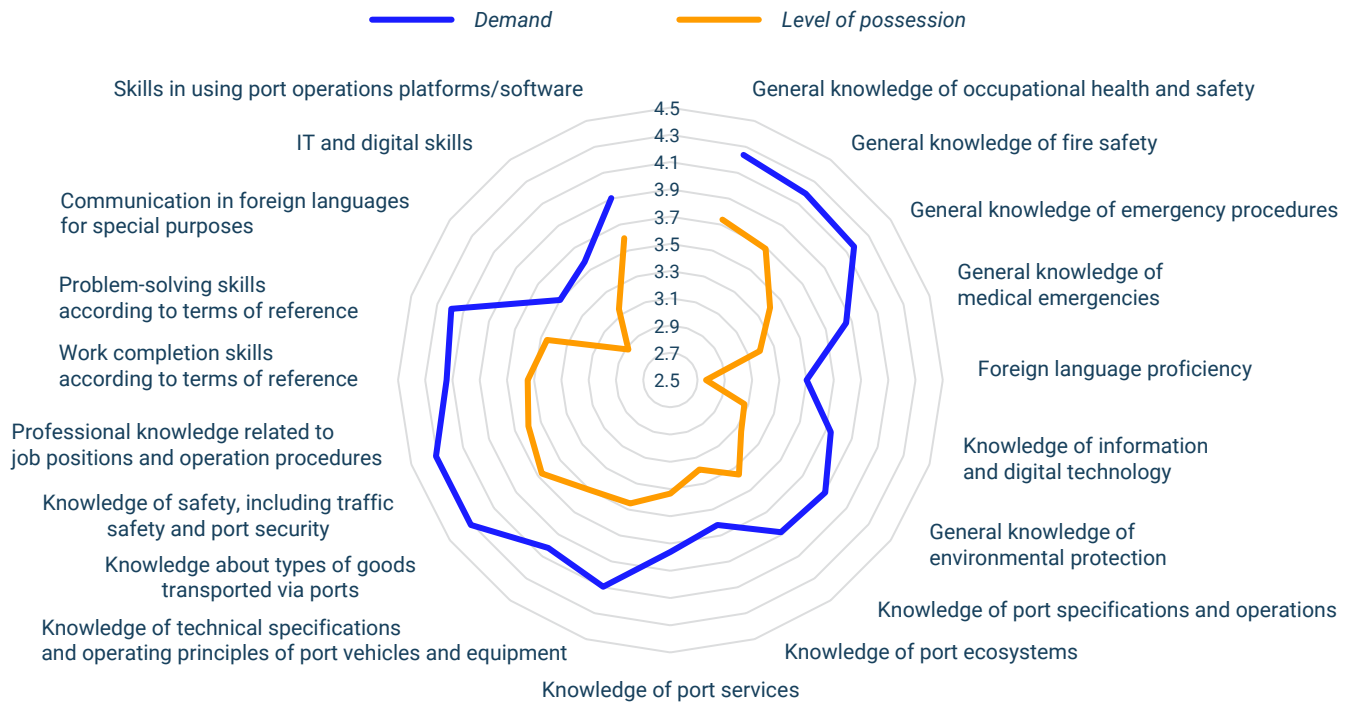


The survey results show that the **top six knowledge and skills with the biggest gap between future demand and current level of possession** among port facility and equipment operators are:

1. Knowledge of information and digital technology
2. IT and digital skills
3. Foreign language knowledge
4. General knowledge of environmental protection
5. Foreign language proficiency
6. General knowledge on emergency procedures



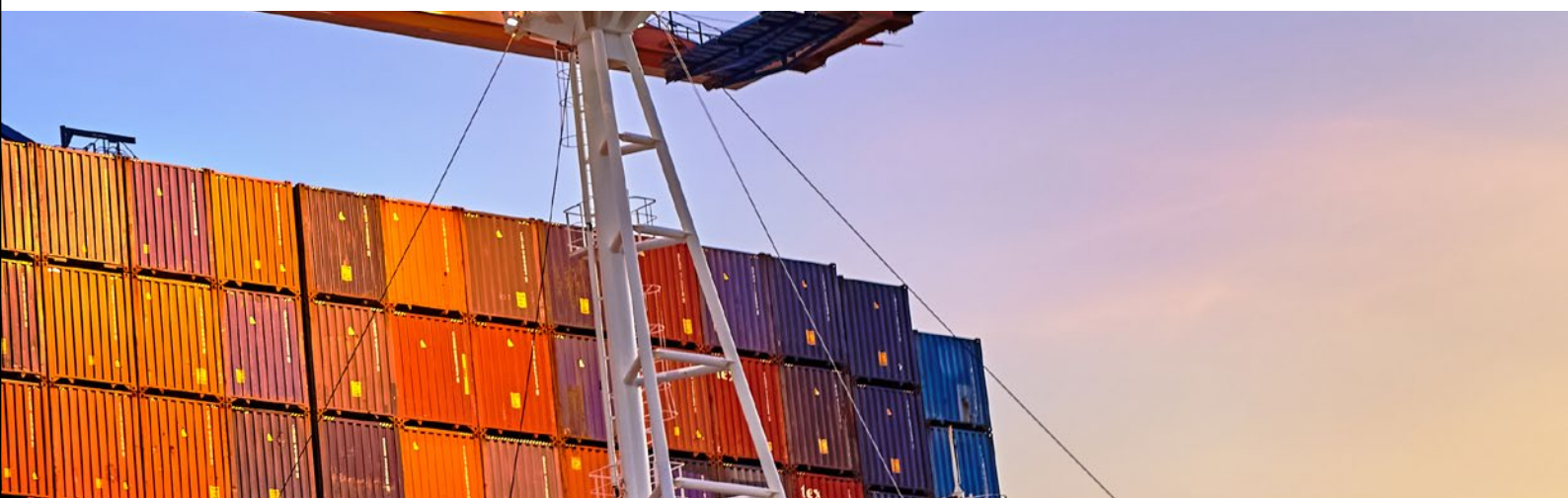
Gaps between demand for and level of knowledge/skills possession - Port operational and technical workers



For port operations, *technical workers and stevedores*, the **top six knowledge and skills with the biggest gap between future demand and current level of possession** are:

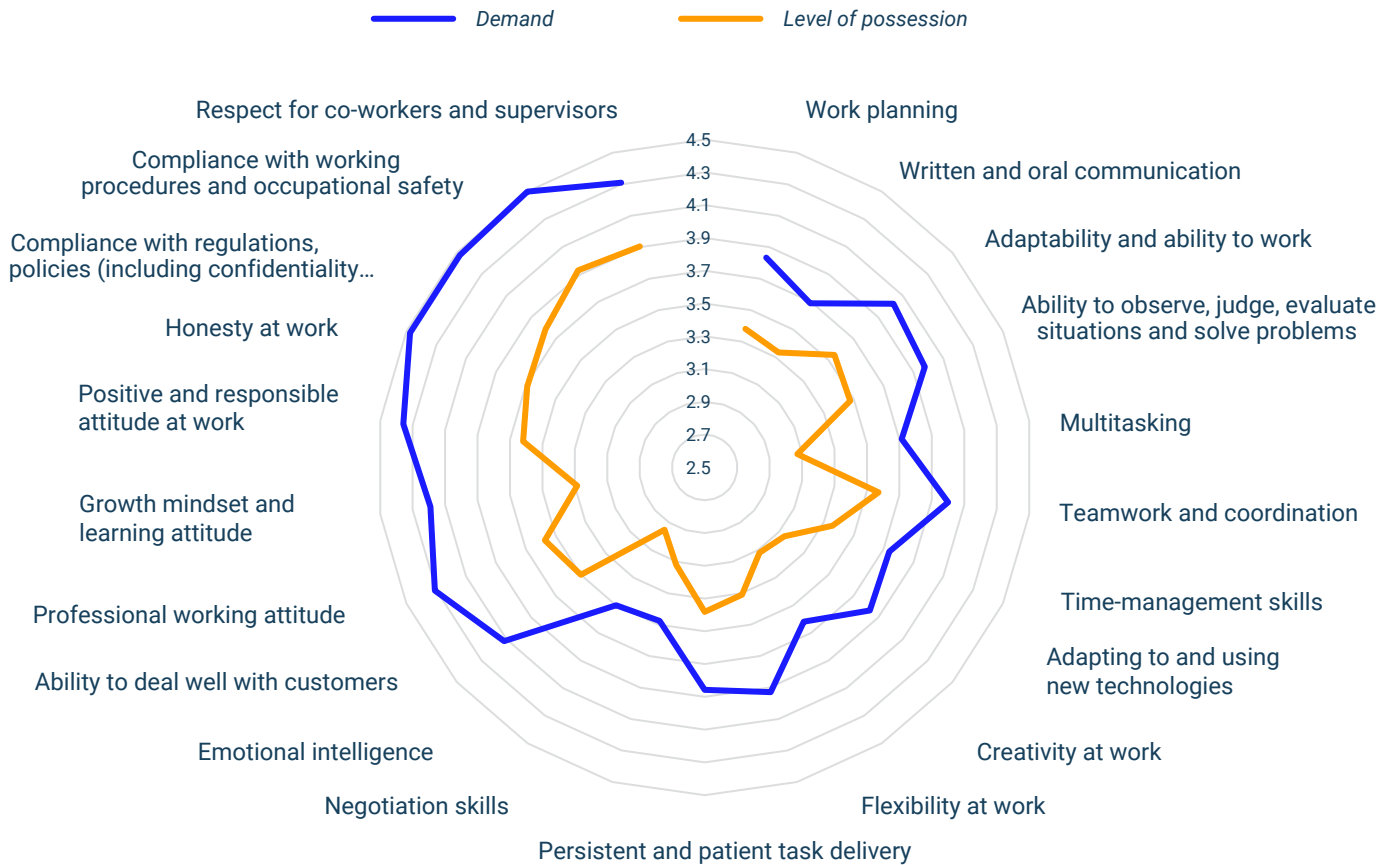
1. General knowledge of environmental protection
2. General knowledge on emergency procedures
3. Foreign language proficiency
4. Knowledge of information and digital technology
5. Problem-solving skills according to terms of reference
6. Professional knowledge related to job positions and operation procedures

These results stress the importance of training to equip knowledge and skills in information technology, digital technology, foreign language, environmental protection, incident and emergency handling, and other technical knowledge and skills.



A COMPARISON BETWEEN CURRENT AND FUTURE DEMAND FOR WORKERS WITH OTHER ESSENTIAL ATTITUDES AND ABILITIES

Gaps between demand for and level of attitude/capability possession- Vehicle/equipment operators

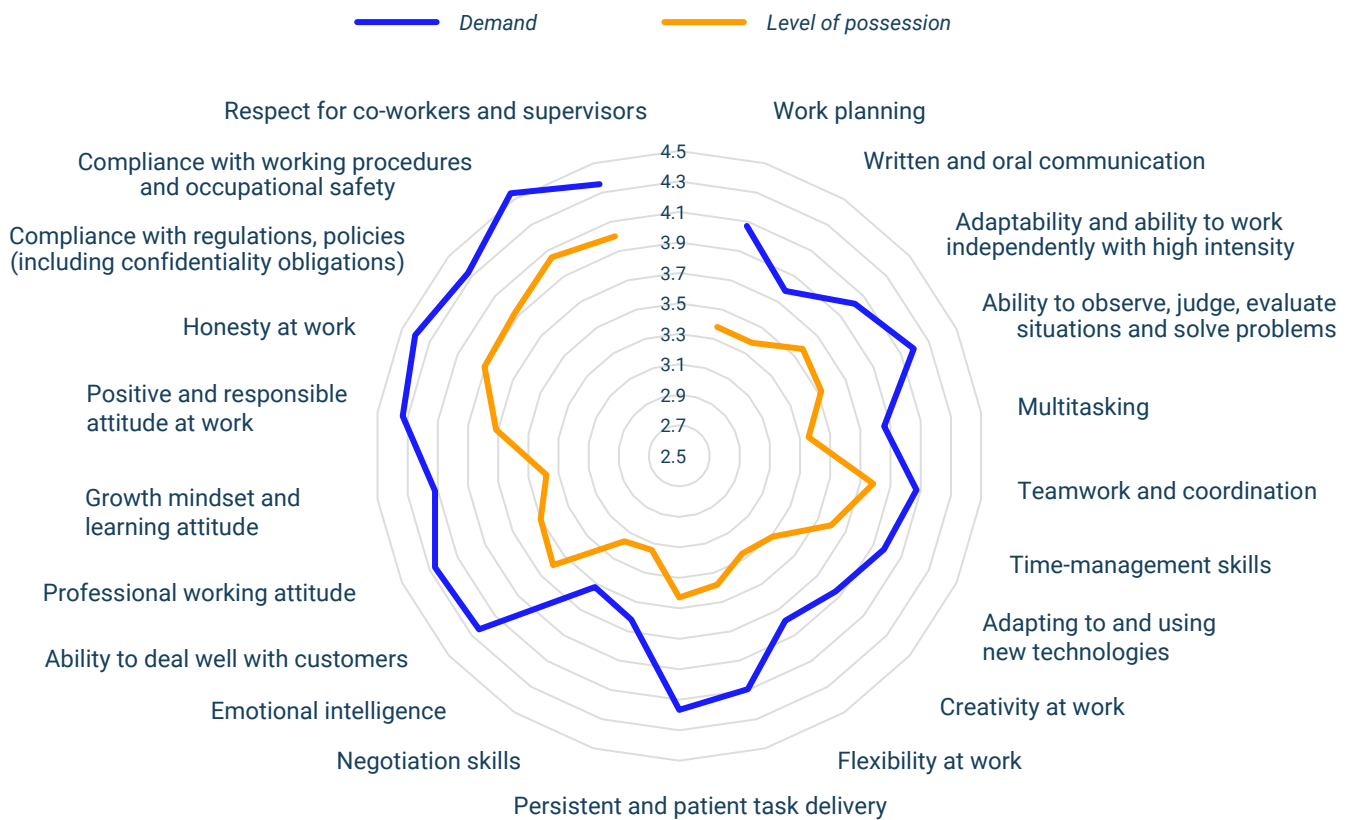


Survey findings show that the need for essential attitudes and capabilities among *port facility and equipment operators, technical workers, stevedores and port operations* is greater than currently exists. The **top five attitudes and capabilities with the biggest gaps between future demand and the current level of possession** among vehicle and equipment operators over the next five years will include:

1. Growth mindset and learning attitude
2. Honesty at work
3. Positive and responsible attitude at work
4. Professional working attitude
5. Adapting to and using new technologies



Gaps between demand for and level of possession of attitudes and capabilities - Port operations and technical workers and stevedores



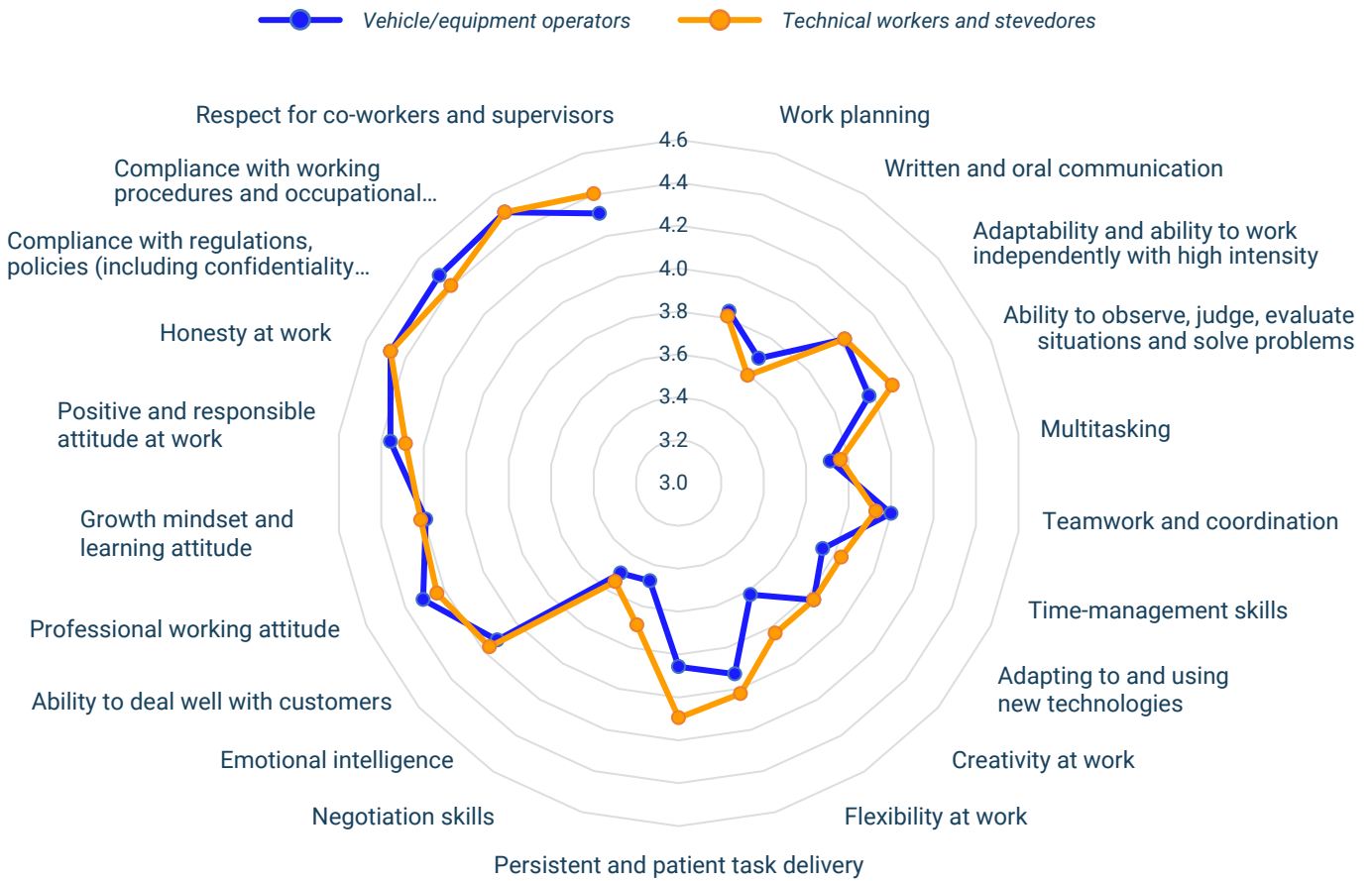
Meanwhile, the attitudes and capabilities with the biggest gaps between future demand and the current level of possession among port operations, technical workers and stevedores are:

1. Growth mindset and learning attitude
2. Professional working attitude
3. Persistent and patient task delivery
4. Flexibility at work
5. Ability to observe, judge, evaluate situations and solve problems

These findings emphasise the importance of training in ensuring staff employees have the requisite knowledge, growth mindset, professionalism, honesty, positivity, responsibility, adaptability towards new technologies and other key attributes to carry out their duties effectively.



Differences in the demand for attitudes/abilities among vehicle/equipment operators and port operations and technical workers and stevedores



The research team also compared the differences in the demand for essential attitudes and found **no significant difference in the demand for essential attitudes and capabilities in these two groups of workers**, especially regarding:

1. Honesty at work
2. Compliance with working procedures and occupational safety
3. Adapting to and using new technologies
4. Growth mindset and learning attitude
5. Adaptability and ability to work independently with high intensity

This finding emphasises the importance of training in developing these essential attitudes and abilities so that port workers can complete their assigned tasks regardless of their job designation.

In its evaluation, the research team found that seaport businesses should focus on (i) **sustainably maintaining** knowledge, skills, attitudes and capabilities that are currently developed at a medium high level and in high demand, (ii) developing sought-after knowledge, skills, attitudes and capabilities that are now developed at a medium low level, (iii) reallocating resources away from highly developed knowledge, skills, attitudes and capabilities that have medium or low level demand, and (iv) focusing on in-demand knowledge, skills, attitudes and capabilities now developed at a low and average level.



RECOMMENDATIONS

1. For State management agencies

- *At the central level:*

Clarify the role of each of the relevant parties regarding human resource development in the port industry within the master development plan for Vietnam's seaport system for 2021-2030, with a vision to 2050.

Review the possibility of integrating training, retraining and skills development in port and seaport operations into the relevant programs managed by TVET institutions.

Institutionalise the business engagement model in skills training and human resource development activities through the Industry Reference Council.

- *At the local level:*

Enhance localities' forecasting and statistics capacity and formulate human resource development plans for required industry skills according to the labour market, especially regarding future skills in new disciplines and port related occupations.

Encourage and create favourable conditions for technical schools, vocational education centres and businesses to provide training on port operations in accordance with local socioeconomic development needs.

2. For VET institutions

Identify high demand job positions and develop appropriate new training packages. Update existing packages to align with changes in the work environment.

3. For the industry

Businesses are encouraged to refer to this report's competency profiles and industry trends to prepare a workforce development plan aligned with their overall growth strategy.

Businesses should actively cooperate with training institutions by sharing their recruitment needs, knowledge, skills and attitude requirements for specific job positions. This collaboration can inform regulators in adjusting relevant training policies, targets and standards. It can also assist training institutions in modifying their training programs, ensuring they produce quality graduates whose skills align with industry demand and development trends.

Businesses should actively implement training activities, starting with developing occupational standards, providing work-based learning opportunities, developing skill-building programs and conducting assessments. Implementing training will help businesses address labour shortages, foster productivity and promote growth.



SKILLS FORECAST FOR VIETNAM PORT INDUSTRY 2024-2028

Any quotation of information from this document must indicate the source





LIRC Logistics Industry Reference Council Secretariat



4th floor, VCCI-HCM, 171 Vo Thi Sau, District 3, Ho Chi Minh City



028 3932 5169



www.lirc.vn



bea@vcci-hcm.ogr.vn